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**B.E (Full time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013
COMPUTER SCIENCE BRANCH**

SEVENTH SEMESTER

EC9073 – BIOINFORMATICS

REGULATIONS 2008

Time : 3 hr

Max Mark : 100

Answer ALL Questions

Part – A (10x2 = 20Marks)

1. What are the steps involved in data processing of PDB?
2. Define the role of structural bioinformatics in system biology?
3. Give the analogy between BNN & ANN and the functions of their components
4. List the major databases used for protein sequences
5. What are the different roles of HMM?
6. What is molecular modeling?
7. What is TSP in gene regulation?
8. Give short note on amino acid sequence
9. What is gridding?
10. What are the methods used to extract the significant modes of variation from the large array of time series expression data?

Part – B (5x 16 = 80 Marks)

11. (i) Discuss the need of bioinformatics technologies? Elaborate primary and secondary resources with well-known biological databases (12)
- (ii) Explain in detail about drug discovery (4)
12. a (i) Discuss in detail about knowledge discovery from databases. Briefly explain a general KDD framework applied to the analysis of protein allergens (8)
- (ii) What are the components of a bioinformatics data warehousing? With neat sketch, explain data ware housing architecture in detail (8)

(OR)

- b (i) Explain in detail about Protein data analysis (8)
(ii) With necessary diagrams detail different learning algorithms used in neural networks (8)

13.a. Discuss about sequence identification and classification in detail (16)

(OR)

b. Detail comparative modeling and protein modeling for biological data analysis (16)

14. a.(i) Discuss Chaos Game Representation of biological sequences (12)
(ii) Discuss the strategies for motif detection in a protein sequence (4)

(OR)

- b.(i) Explain in detail about fractal analysis (8)
(ii) Discuss different approaches of motif recognition with a sample pattern (8)

15. a Elaborate data analysis for pattern discovery. (16)

(OR)

b Explain briefly about Image analysis for data extraction (16)

----- All the Best -----